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ABSTRACT

This report capsulizes the problems of defining the meaning of social competency in young children in relation to a panel discussion held in January 1973. Four approaches are discussed: (1) the "bag of virtues" approach, (2) the "industrial psychology" approach, (3) the normative-expectation approach, and (4) the theory-guided approach. Seven conceptual distinctions important in defining social competency, and twenty-nine statements that represent facets of social competency in young children are outlined. Implications for measurement, research, and policy, and an index of competency variables are included. (SET)

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SOCIAL COMPETENCY in young children

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Report under OCD Grant Number H-2993 A/H/O

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Members of the January 1973 panel:

Ernest Bernal, Jr., Director, Bilingual Early Elementary Program, Southwest Educational Development Laboratory; *John B. Carroll*, Chairman, Human Learning and Cognition, Psychological Studies Division, ETS; *Donald Cohen*, Yale Child Development Center; *Bruce Dohrenwend*, Community Psychiatric Research Unit, Columbia University; *Walter Emmerich*, Chairman, Human Development, Psychological Studies Division, ETS; *Edmund Gordon*, Director, Health Services, Sciences, and Education, Teachers College; *David Goslin*, Staff Sociologist, Russell Sage Foundation; *Phyllis Katz*, Graduate Center, City University of New York; *Leonard Krasner*, Department of Psychology, State University of New York - Stony Brook; *Patricia Minuchin*, Department of Psychoeducational Processes, Temple University; *Charles Leo Thomas*, School of Education, Indiana University; *Edward Zigler*, Psychology Department, Yale University.

Others attending the meeting:

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On January 23-25, 1973, a panel of experts met in Princeton, New Jersey, to try to define the meaning of "social competency" in young children. They were united in feeling that social competency was something more than general intelligence and in recognizing the need to explicate that "something more" as a basis for fostering and evaluating children's development. They were divided in their approaches to the problem, largely because of differences in their own professional ideologies and experiences.

In this report, an attempt has been made to distill the essence of the panel discussion, to consolidate the divergent directions it took, and, in some cases, to compromise opposing viewpoints.

Coping with the Complexities of Competence

It should not have been surprising that the panel had difficulties with its task or that a major integrative effort was required after they had gone home. The history of attempts by philosophers, scientists, and educators to cope with the complexities of human competence should have provided ample notice of the problems.

Guttman, summarizing Spearman, reminds us that

> Plato distinguished between two kinds of abilities: sense and intellect. Later some writers added memory, and others added imagination or invention. Before the fall of the Roman empire, speech and attention were frequently introduced to the list. And lastly, movement.

Over the centuries the lists of abilities gradually became longer until the nineteenth century when faculty psychologists produced the longest list of all.

Spearman began The Abilities of Man with a scene from Oliver Twist describing Fagin's treatment of Oliver after the boy attempted to escape and call the police. "Here," Spearman said, "is a typical picture of mental life in one of its most acute phases.... Fagin sees Oliver, remembers his attempt to escape, thinks of punishing him, notices the club, marks the boy shrinking away and breathing quickly, perceives him stagger under the blow," and so on. "Fagin also becomes angry at what the boy has done, entertains a desire to punish him, relishes the anticipation of his writhing in pain, seizes voluntarily the club and actually uses it." Processes of the first kind Spearman called "cognition" and processes of the second kind, he said, involved "conation and affection." Although Spearman asserted that "the processes of cognition cannot possibly be treated apart from those of conation and affection," he insisted that "no less certainly the various aspects of the behavior can and must be submitted to separate consideration." That was in 1927.

In 1931, the Carnegie Corporation established the Unitary Traits Committee to explore the social and psychological implications of a broader conception of human intellectual functioning than was reflected in the theories and practices of the day. Among their grants were ones to E. L. Thorndike for an exploratory study of unitary differential traits in human nature and to Karl Holzinger and Charles Spearman for analyses designed to uncover additional factors of human competence. With the repeated application of factor analysis by many investigators over the years, again the lists of mental dimensions proliferated.

Nicholas Murray Butler talked about differential traits in somewhat different terms and related them to the outcomes of education:

> There are five tests of the evidence of education--correctness and precision in the mother tongue; refined and gentle manners, the result of fixed habits of thought and action; sound standards of appreciation of beauty and of worth, and a character based on those standards; power and habit of reflection; efficiency or the power to do.

In 1968, Edmund Gordon repeated what he had said many times since the summer of 1965 when Head Start was born:

> Although the goals of education tend to be stated in broad terms, when we come to assess education it is always to cognitive development and academic achievement that we first look for evidence of change. Too often we either stop with those first results or turn with less rigor to look at other areas either as a second thought or as a rationalization for our failure to find more impressive evidence in the cognitive domain.

In 1972, Edward Zigler--again not for the first time--bemoaned that "it may come as a surprise to the Nation that this preschool program was not mounted in hopes of dramatically raising IQ scores... Rather, the creators of Head Start hoped to bring about greater social competence in disadvantaged children. By social competence is meant an individual's everyday effectiveness in dealing with his environment ... his ability to master appropriate formal concepts, to perform well in school, to stay out of trouble with the law, and to relate well to adults and other children."

Recourse to Symposia

Not only is the problem of defining the full range of human competence an ancient one but the current process for coming to this definition is not without its enlightening, if somewhat discouraging, precedents. We have mentioned the Carnegie Committee of 1931. Spearman, whose perceptiveness is surprisingly timely, devoted an entire section of his great book to "Repeated recourse to symposia":

> In a resolute effort to clear up the situation, recourse was had to a symposium of several pre-eminent British authorities. And as was inevitable from such an assembly, many thoughts were uttered of high interest and suggestiveness. But in respect of the main purpose, the result can hardly be regarded as other than disappointing.

And after another symposium:

> As before, such a distinguished gathering could not fail to beget many an observation bearing the stamp of brilliancy. But as for the essential aim ... there appears to have been no success obtained.

And after yet another symposium (this one in 1923):

> But the situation became even more perplexed than at the previous meeting.

In addition to all of the committees who through the years have assailed the domain of intelligence (and of effective human functioning in general), there have been many groups called together to decide which of these dimensions were to be the targets of educational programs. The panel that met in Princeton in January 1973 was just one in a sequence of committees concerned with the objectives of interventions at early childhood levels. It is true that the questions different panels sought to answer were phrased in somewhat different terms--for example, "What should be the characteristics of a comprehensive set of instruments designed to assess children's readiness to enter usual school programs?" "What should be the goals of Head Start for children of 4 to 5?" "What are the most important variables to assess in a comprehensive evaluation of the effectiveness of preschool programs?" However, the substantive issues underlying all of these efforts have been very similar. The particular charge to the January panel was to define "social competency" in young children and to specify some of the implications of this definition for measurement and research.

Tenacity of IQ

After all that has gone before, it is not easy to see why in 1973 people are still using general IQ as the major yardstick of development and the principal criterion of the effectiveness of early education programs. And why it was deemed necessary to convoke still another symposium. And why there was any reason to anticipate that this effort would be any more successful than its predecessors--or its results any more influential.

The continued emphasis on IQ can probably be attributed to several factors. It is a venerable concept in psychology and has been comparatively well measured. Furthermore it has a larger collection of correlates that are predictive of success in a wide variety of human endeavors than any other variable. In fact, IQ is such a global variable that it incorporates a great many other variables in whole or in part. Thus there are those who argue that unless an intervention program influences IQ, it is trivial to look for other effects; if there were any significant other effects they would be reflected in IQ changes. Some go further to state that improvements in motivation, attention, and the like are worthwhile goals only if they affect general intelligence.

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It would be easier to accede to the primacy of IQ in early education if education were only a distributive enterprise, gradually channeling individuals into adult-role niches on the basis of expectancy of success. (Even here, however, IQ seems to be more predictive of level of later accomplishment than of type of accomplishment. Although Terman said, "I am convinced that to achieve greatly in almost any field, ... special talents have to be backed up by a lot of Spearman's g," he also pointed out that

" ests of 'general intelligence' ... do not ... enable us to predict what direction the achievement will take, and least of all do they tell us what personality factors or what accidents of fortune will affect the fruition of exceptional ability.")

However, education cannot be concerned only with distribution or prediction. In some cases--and these are the cases in which education is most appropriately characterized as "intervention"--its very nature is to try to change the predictions which backgrounds of poverty or earlier poor achievement would lead to. In most cases, its programs are oriented primarily toward the special talents Terman referred to and the factors that may affect fruition of abilities. In all cases, it must be concerned with the quality of children's lives while they are being educated as well as in the future.

Underlying all of these conceptions of the role of education are a differentiated view of human capability and potentiality and a need for differentiated treatments. By definition, this view and this need cannot be served by undifferentiated measurement strategies.

Unfortunately, the very predictive power of the IQ variable has tended to dominate developments in psychological and educational measurement. Thus, as we indicated earlier, many investigators and practitioners have continued to use IQ tests because they were there. When they sought differential measures of abilities, achievements, and noncognitive factors, they encountered both a paucity of valid and reliable measures and a confusing abundance of inadequate and idiosyncratic tests, indexes, and schedules. This was partially because development of measures of particular variables had not proceeded out of a systematic, rational mapping of domains

and the relationships between them. Thus there might be hundreds of measures of anxiety (representing various investigators' limited operational definitions), dozens of measures of rigidity (with low correlations among them), and only one or two measures of interpersonal sensitivity in the child. The lack of mapping in turn could be traced to the difficulty of getting educators and social scientists to agree about what the variables were that belonged on the map.*

Goal Definition and the Problem of Values

Participants in the successive panels struggling with the problem of defining goals and dimensions of competence for young children are typically struck at the outset by the value-laden nature of the enterprise. Reactions quickly encompass a number of concerns: with being value-free or at least value-neutral (the conventional stance of social science), with the pluralistic and sometimes conflicting values of our society, with whether there are transcendent values holding for the whole society, and with the fact that values change over time and circumstances. Panel members also suffer from a reluctance to impose their value-free or value-full analyses on others.

This concern with value issues is related to the kinds of approaches taken to defining goals and desirable dimensions. Kohlberg and Mayer (1972)

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*Some social scientists insist that specification of the domains is an empirical problem and have undertaken long-term programmatic efforts within particular domains; but such an approach must indeed be long-term and provides no guarantee that important areas will be covered first, that some areas will be covered at all, or that relationships between areas will be studied.

outlined three of these approaches and the January panel added a fourth. They can be summarized as follows:

1. The "bag of virtues" (or Boy Scout or Sunday School) approach. This approach attempts to specify the set of traits characterizing a healthy, fully functioning person. It suffers chiefly from historical lethargy, difficulties in accounting for multiple and sometimes conflicting "ideals," and confusions about traits which have different values at different age levels.

2. The "industrial psychology" (or prediction-of-success or predictors-and-precursors) approach. This strategy is always future-oriented; goals for young children may be stated in terms of capabilities needed for adult-role functioning. Difficulties arise to the extent that certain adult abilities are not directly predictable from the characteristics of children. Indeed, some children's characteristics may be positive predictors of adult functioning at one age and negative predictors--or unrelated to adult behavior--at another age. There is a criterion problem here too, since the dimensions of effective adult behavior have not been much better defined or mapped than the dimensions of effective child behavior. Furthermore, by the time the children become adults the requirements for adults may have changed.

Another problem that must be faced with approach 2 as well as approach 1 has to do with characteristics that may be valued and adaptive at one point in time but either may lead to negative consequences or be considered inappropriate at a later point in time. For example, exploratory behavior is valued for everyone, but if it is permitted to occur without any restraints in the young child it can lead to inability to control and focus

attention in situations that demand a disciplined response. And impulse expression, frequently encouraged in preschool programs, can cause serious problems in many business and social situations.

3. The normative-expectation approach. Goals are stated in terms of age- or grade-related expectancies. Usually these expectancies are derived from population surveys--for example, those using achievement and ability tests. Frequently, too, goals are oriented toward the averages established by those surveys--for example, to have all third graders in a city reading at the national median or above. In addition to the problems of shifting norms groups and changes in the meaning of scores at different points on the measurement scale, this approach runs into the danger of limited purview: Its proponents may tend to focus attention only on those variables with which they have had a good deal of experience or which have been extensively measured (and that can mean the variables that have been easy and inexpensive to measure). An even more serious drawback to this third approach is that, just as focus may be limited, so may aspirations be unnecessarily assimilated to the status quo.*

4. The theory-guided approach. This approach rests upon the existence of theoretical conceptions about the nature of the developing organism and its interactions with the environment. It should have the advantage not only of identifying important variables but also of considering those variables in hierarchical and interdependent structures. Mediating and organizing

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*It is interesting to note that the goals and measures for the National Assessment of Educational Progress were built on the basis of expectations about the level of performance that should be attained by the top 10 percent, the average, and the bottom 10 percent in four age groups in the United States.

processes in the human being would then become the organizing scheme for structuring and implementing the goals. Thus the choice of variables and goals would derive from an understanding of the nature of the processes of learning, development, and social involvement. The Kohlberg-Mayer "developmental-philosophic" strategy is one such theory-guided approach; it is based on the cognitive-developmental theories of Piaget and the philosophic-educational theories of Dewey. The theory-guided approach is possible only if there are relevant theories to guide it. It is fruitful to the extent that those theories are comprehensive enough to embrace a wide range of critical variables, including those which common sense and intuition indicate are important.

There is a relatively short step between the processes of specifying goals and of specifying criterion measures for program evaluation. The January panel vacillated between the task of defining "social competency" in general terms and the task of defining those dimensions of social competency that are implicit in the stated goals of existing intervention programs, specifically Head Start. The latter program-centered focus leads to a fifth strategy for defining variables, a "goal-guided" strategy, but it is not really directed toward the same end as the four preceding approaches which treat goals and associated variables simultaneously. The goal-guided strategy is, of course, entirely relevant only in situations where the goals are already well defined and it does not necessarily generalize to other programs and other times. The panel recognized the weaknesses of each of the four strategies for defining goals and thus the need not to exclude any of them in their efforts to create a broad delineation of "social competency." As indicated above, they also moved into the fifth (goal-guided or evaluation)

strategy occasionally, and the strategy was useful in some cases for appraising the feasibility of translating a variable or construct into measurement terms.*

The meeting was oriented toward definitions of "social competency" that would guide the planning of future programs as well as the improvement of ongoing ones, and the panel noted the urgent need for better assessment and evaluation of programs that have been in existence for a number of years. At the same time it was recognized that rational analyses and program evaluations--however sound--are not enough to effect substantial improvements in interventions into the lives of young children. Such improvements can only come from increased understanding of the processes of learning and development that a concomitant program of targeted research can provide.

Conceptual Distinctions Important in Defining "Social Competency"

"Social competency" is just one of many phrases that might have been used to mobilize attention to the broad range of cognitive and personal-social dimensions of the developing child. As indicated earlier, the panel members were united in rejection of intelligence as a unitary trait or as the sole

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*When the panel used this strategy for the task at hand, they focused mainly on the educational component of intervention programs. It must be recognized that comprehensive programs such as Head Start also involve health and social service components, and some advocates of these programs stress these components over education. Any evaluation of these programs would, of course, have to encompass all components.

criterion for evaluation of intervention programs. They were also united in doubt that their symposium could generate a definitive description of the parameters of "the whole child."

Among the problems that had to be resolved--or at least confronted--were these:

1. Distinguishing between behaviors that are prized by many segments of society across a large number of situations, and behaviors that are not necessarily universally admired or are differentially appropriate to different situations. There are actually two coordinates here and four quadrants, for a behavior can be prized by many but only for certain situations or be adaptive in many situations but not widely valued. In reality, the dimensions are correlated, and it is more difficult to think of examples in some cells than in others. However, they are not perfectly correlated, and this means that goal makers must consider the ecological and population generality of each construct they think is important. It does not mean that they discard constructs that are context- or population-specific; but it requires that each statement about a "socially competent" attitude, skill, or coping style be accompanied by an enumeration of the population subgroups and of the classes of occasions for which it is an exemplar of competence. This step requires delineations of the population groups (boys, girls, regional and ethnic groups, etc.) and taxonomies of contexts (preschool, home, adult-child interactions, peer relationships, etc.) that are relevant to the young child.

2. Distinguishing between proficiency and performance, and between maximal and typical performance. The former distinction acknowledges the difficulty of making inferences about capability in the absence of a response

or when the child makes a low-level response. It is related to the preceding problem, in that context and other factors can play as large a role as capability in determining level of response. Early education programs must be concerned, first, with developing response proficiency within the child's repertoire and then with encouraging its display or performance in appropriate situations.

The maximal-typical distinction is both goal- and measurement-related. We are sometimes interested in the best performance that the child is capable of, but more often we are interested in the level and quality of performance that he exhibits under ordinary circumstances.* Most specifications of goals of early childhood programs are not explicit on this point, and this leads to confusion on the part of those who try to implement or evaluate the programs. On the measurement side of the problem, we should recognize that there is a bias toward assessing maximal performance, especially in the cognitive area. This is probably an appropriate bias, because, even when typical performance is at issue and is being measured, it is frequently necessary to estimate maximal performance (or underlying proficiency) in order to interpret the meaning of typical-performance levels. As indicated earlier, this is of critical importance when typical performance is low. The discrepancies between maximal and typical performances are also valuable in deciding on appropriate intervention strategies for individual children: If both typical and maximal performances are low, it is better to concentrate on improving

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*This distinction between maximal and typical performance should not be confused with the distinction between optimal and minimally acceptable performance. Maximal and typical performance relate to observed behavior, whereas optimal and minimally acceptable performance relate to standards used in the evaluation of performance.

proficiency; if typical performance is low and maximal performance is high, it is better to concentrate on raising typical performance levels, probably through motivational and context manipulations; if maximal performance is low and typical performance is high, we should reexamine our concepts and measurement techniques.

3. Recognizing that variables may have different meanings--and thus different implications for social/educational action--at different levels of intensity or in their positive and negative ranges. For example, with a variable such as impulsivity, measured in terms of reaction time, quick responses may indicate lack of reflection but extremely slow responses may be more indicative of obsessiveness than of reflectivity. Examples of bipolar dimensions include flexibility-rigidity (frequently measured with different scales in its positive and negative regions) and sociability (extroversion-introversion); extreme behavior at either end may be maladaptive, but in the case of young children we are frequently most concerned with identification and treatment of the negative extremes (extreme rigidity, or introversion carried to the point of complete withdrawal). Some of the confusion in this area arises from taking labels for variables too literally without careful analysis of their meanings and correlates.

4. Distinguishing between the positive components of social competency (the characteristics we can agree we want the child to have or develop) and negative characteristics which may serve as obstacles to learning, development, and societal adjustment. In the first case, we can state the goal in terms of developing, increasing, or maintaining the component, while in the second case we are concerned with reducing or eliminating it. Examples of

variables in the latter category are hostility, aggression, and anxiety. In the extreme these are pathological behaviors, and unfortunately they seem to be more stable longitudinally than some of the more positive traits.

5. Identifying different classes of variables in terms of their developmental trends. The easiest class to deal with encompasses those variables that increase with age and training (frequently tapering off at later ages or with lack of utilization); many of the typical school achievement variables and variables of intellectual competency belong here. An error made frequently in the past was to assume the same form of incremental function for variables which in fact behave quite differently. Indeed some variables decrease with maturity--for example, impulsivity and even positive self-image (at least for high achieving children). Other variables may be cyclical or remain relatively constant. Those in the last categories present special challenges in terms of goal definition and intervention, depending on whether the characteristic is judged positive or negative, on the age level for which the goal is being defined, and on the developmental stage at which the intervention is introduced.

6. Recognizing the importance of defining and assessing social competency in dynamic as opposed to static terms. This implies both taking account of the different developmental trends for variables (as discussed in the preceding point) and the need for repeated measurement of the stage or direction of development. It implies too that criterion variables at one point in time may serve as mediating variables in the longer run.

7. Making explicit the relationships between program goals for parents and program goals for children. In some cases, a major program goal is to effect changes in parents. And such attempts to foster changes in parents

are frequently based upon a general philosophy that improving parent competency and ameliorating family problems through social services will have an indirect and long-term positive effect upon the children in the family. Furthermore, some of the variables of social competency for parents resemble those for children. However, this panel's objective was to define the goals for children, and indeed in the short time available it could not do complete justice even to that task. Parent involvement thus was examined only as it might be directly instrumental to the development of child competency. In this case, the criteria of children's social competency would be appropriate not only for evaluating the direct effects of a program on the children but also the effectiveness of the program in engaging parents as agents. For example, some programs attempt to increase parent ability to interact supportively with children; this should in turn help the child in such areas as language development and self-confidence and, in general, to learn how to utilize adults as learning resources.

Components of Social Competency and Goals of Early Intervention Programs

The twenty-nine statements that follow represent facets of social competency in young children and can serve as goals of early intervention programs. To some extent, the statements reflect all of the approaches to goal definition cited earlier, although the "prediction-of-success" approach was less directive than the others and criteria of success were left implicit rather than explicit. At first glance, the "bag of virtues" approach may appear to dominate; it does to the extent that behaviors valued by parents

and society in the seventies are essential components. However, some of the statements are also associated with a normative-expectation approach, in that age- and stage-appropriateness are highlighted. Most important, the statements are systematically theory-guided, although there was no single theoretical school of thought to embrace the full range of "competency." Rather, concepts were drawn from a number of different theories within domains and from partial formulations bridging domains. Among the most influential were the conceptualizations of Piaget, Guilford, David Russell, Rapaport, and Binet in the cognitive-perceptual areas; Tomkins, Rotter, Schachtel, Seymour Sarason, Carl Rogers, Emmerich, and Bandura in the personal-social areas; and Lewin, Werner, Thurstone, Witkin, Dewey, Kohlberg, J. McV. Hunt, Robert White, Bruner, and Kagan in the areas of interface between cognition and personality.

There are no doubt some facets of social competency that have been omitted. Moreover, without a corresponding taxonomy of situations (see the first point in the preceding section), it has not been possible to specify all of the conditions under which a given process or behavior is desirable. It should be recognized too that few intervention programs would attempt explicitly to implement all of the goals. However, if the goal options are viewed in a comprehensive context, program directors should at least be sensitized to the need to avoid subverting some of the goals in their zeal to foster others.

For the reader's convenience, there is an Index of Competency Variables at the end of the report.

1. Differentiated self-concept and consolidation of identity

The child recognizes that he has different levels and kinds of skills in different areas of cognitive and interpersonal functioning and different interests in different areas; at the same time there should be an integration of these differentiated subsystems into a consolidated identity so that he appreciates some constancy of self across time and situations.

2. Conception of self as an initiating and controlling agent

The child tends to initiate action and direct his own behavior within realistic environmental constraints; he does not feel powerless, or a pawn of environmental forces. This goal includes some feelings of responsibility on the part of the child for his own learning and skills acquisition and for decisions affecting himself and others.

3. Habits of personal maintenance and care

The child meets common standards for his peer group in cleanliness, grooming, hygiene, eating habits, bladder and bowel control, sleeping habits, and safety practices.

4. Realistic appraisal of self, accompanied by feelings of personal worth

The child's appraisal of his abilities and interests is not at substantial variance with his performance and behavior; however, even for children at relatively low levels of proficiency, there must be some feeling of worth as an individual. Here is a case where the goal is not necessarily to develop higher and higher feelings of worth but rather to avoid any instances of extremely negative self-deprecation. (At adult levels, positive extremes in self-esteem--grandiosity--may also have pathological implications.) Realistic appraisal of self and feelings of personal worth,

while important objectives in their own right, also undergird resiliency in the face of failure or frustration and are reflected in level of aspiration and other motivational processes.

5. Differentiation of feelings and appreciation of their manifestations and implications

The child knows about and experiences different types of negative and positive feelings, recognizes their expression in himself and others, and takes this recognition into account in his actions and judgments. These abilities are a necessary, if not sufficient, basis for the development of intra- and interpersonal sensitivity. They also provide an affective groundwork for later aesthetic satisfaction.

6. Sensitivity and understanding in social relationships

The child perceives and accepts differences between himself and others, and appreciates perspectives and viewpoints of others. He rejects clearly antisocial values (e.g., violence) but tolerates a broad range of values different from his own.

7. Positive and affectionate personal relationships

The child does not hesitate to display affection to adults and other children and forms relatively stable friendships and personal associations.

8. Role perception and appreciation

The child recognizes that children and adults take somewhat different roles in different situational and interpersonal contexts, knows what is expected of others and himself in these different contexts, and takes role expectations into account in his own behavior. These kinds of

sensitivities and adaptations are especially important when radical shifts in social or cultural context occur--e.g., between Spanish home and "mainstream" school. However it is important too that the child appreciate the diversity of available role options and reject artificial (or stereotypic) boundaries on role opportunities.

9. Appropriate regulation of antisocial behavior

The child does not exhibit a recurring pattern of extremely disruptive, violent, aggressive, hostile, or other types of antisocial behavior (e.g., lying, stealing, cheating). Neither does he avoid these behaviors through massive and primitive defenses that repress or deny the underlying impulses, for such defenses are associated with anxiety and neurosis. Rather he avoids such antisocial behavior through moderation, redirection, or other mechanisms of impulse regulation that are at least partially under his cognitive control.

10. Morality and prosocial tendencies

When there is an opportunity or situational expectation for prosocial behavior, the child engages in such behavior more often than not. (That is, the child tends to be cooperative, obedient, helpful, and fair as a function of the role requirements, his perceptions of the needs of others, and other situational factors.) Not only does the child exhibit prosocial behavior, but as he matures he becomes increasingly aware of the reasons and principles (moral and social) for it.

11. Curiosity and exploratory behavior

The child evinces curiosity about his environment and actively explores it. He undertakes and continues such exploration without external inducement or pressure, particularly in areas of personal interest.

12. Control of attention

As a function of situational or task requirements, the child attends to relevant cues for an appropriate length of time and at an appropriate level of concentration. The important goal here is for direction, duration, and intensity of attention to be under the control of the child.

13. Perceptual skills

The child perceives a unit or form as separate from its background, discriminates between similar units and forms (even under simple transformations), analyzes forms into their constituent units and parts, and synthesizes units or parts into an organized form. These goals apply within each of the critical sense modalities: visual, auditory, tactile, and kinesthetic. Skills in visual and auditory differentiation are ordinarily basic to competency in language and reading; perceptual skills in these modalities include seeing letters within words (hearing phonemes within longer utterances), discriminating between similar letters such as p and b (hearing the distinction between similar sounds such as ch and sh), separating a word into syllables, and blending letters (or sounds) into meaningful wholes.

14. Fine motor dexterity

The child manipulates small objects and uses tools--within his limits of physical development.

15. Gross motor skills

The child walks, runs, jumps, and reaches without excessive clumsiness and within the limits of his physical development. Note that this goal does not imply that every child should achieve athletic or aesthetic superiority in movement.

16. Perceptual-motor skills

The child coordinates visual, auditory, and motor behavior at an age-appropriate level or within limits of sensory acuity and other aspects of his physical development. Included here are skills in copying forms, mimicking sounds, and imitating gestures and movements.

17. Language skills

The child recognizes the meaning of words he hears, and recalls, comprehends, and interprets spoken words and sentences. At the later age levels, he exhibits the same skills with printed words and sentences and also extracts information from a body of text or tabular material. He labels objects and events appropriately, repeats information given to him, retells stories, describes objects and events, makes requests and gives instructions, and tells stories of his own invention--speaking audibly and comprehensibly. At the later age levels, he labels, retells, describes, makes requests, gives instructions, and tells stories in writing; he records information from dictation, written text, or other sources; and his writing is legible and intelligible. In his writing, he observes the simpler conventions of punctuation and capitalization and he misspells only the more difficult words. He recognizes the functional properties of words/phrases and the structural components of sentences, and applies this knowledge in his own spoken and written production.

18. Categorizing skills

The child recognizes whether objects (or events) are similar or different; apprehends the nature of the similarities and differences; categorizes objects or events on the basis of attributes, generic classes, or relationships (functional or thematic), dealing with exclusions as well as

inclusions; labels categories; and verbalizes the principles underlying categories.

19. Memory skills

The child has adequate memory skills to retrieve information on the basis of relevant cues--not just immediately but also over time. The memory skills encompass appropriate strategies of attending, organizing, and rehearsing. "Appropriate" here is relative to the content/form and the retrieval expectancies. Memory is usually measured in terms of retrieval performance. However, if a child's retrieval performance is unsatisfactory, then it is important to try to determine where the difficulty lies: in the attention process, the organization and storage process, or the retrieval process itself.

20. Critical thinking skills

The child perceives and identifies problems, analyzes and appraises the elements of situations (including missing components, contradictions, and inconsistencies), and judges and evaluates conceptions, processes, and products (his own and those of others). Essential to these analyses and evaluations is the child's ability to appraise his own capabilities and resources in the context of situational demands.

21. Creative thinking skills

The child generates multiple responses (language and motor) and conceptions (ideas, associations, implications, hypotheses) to situations; in generating these responses, the child moves flexibly across contents and forms (does not perseverate within categories and breaks set or habit adaptively); some of the responses the child generates are

original, unusual, or aesthetically satisfying. The occasion for creative responses may be invented by the child or may be initiated by others. In either case, responses may involve translation and elaboration of existing forms or, at increasingly higher levels, transformation of existing forms and construction of new forms.

22. Problem-solving skills

The child applies memory skills and skills of critical and creative thinking to identification, analysis, and solution of problems and to evaluation of his own responses and products in the process. In problem solving for decision making, this evaluation includes appraisal of alternative solutions and their consequences. With the repeated application of these skills in recurrent problem areas (such as categorizing), the child develops generalized strategies of problem solution that he draws upon appropriately in encounters with similar problems.

23. Flexibility in the application of information-processing strategies

The child recognizes that there are different approaches to exploring the environment and to obtaining and processing information from it and that these approaches are differentially effective in different situations; he applies these approaches flexibly and appropriately (singly and in balance or combination) without being locked into habitual modes of perceiving and thinking (cognitive styles). For example, in order to obtain information about a new situation, he does not limit his exploration to discrete components but considers the situation as a whole and the relationships among components (focusing vs. scanning). Of course, the child cannot apply differential information-processing strategies

if he does not have them in his repertoire, so this goal of flexibility in application is attainable only if the child first learns to adopt such opposing strategies as:

risk taking - caution

persistence - relinquishment

spontaneity - reflection

memorization - organization for reference

intolerance of ambiguity, contradiction - accommodation of ambiguity, contradiction

24. Quantitative and relational concepts, understandings, and skills

The child exhibits increasing evidence of concept attainment, understanding, and skills--at age- and stage-appropriate levels--in the following areas: number (including one-to-one correspondence; meaning of the positive integers, zero, and fractions), number properties (e.g., odd-even, divisibility), seriation and ordinality, conservation, relation and comparison (numerosity, size, time, spatial position, value, etc.), causality, and measurement and estimation; enumeration, counting, and simple arithmetic and other formal operations.

25. General knowledge

The child has a reasonable amount of knowledge in areas important to functioning in school and outside: health and safety, social environment (including adult roles), physical environment, practical arts (including knowledge of tools), consumer behavior, sports and games, art and music, literature, etc. Such general knowledge not only is important to present functioning and survival, but also facilitates the acquisition of more advanced knowledge and provides a basis for interpersonal communication and aesthetic satisfaction.

26. Competence motivation

The child wants to improve his skills, exhibits satisfaction with improvement or mastery, and seeks learning experiences in the absence of external pressure or reward. This kind of motivation is more associated with the process of mastery than with any particular content of learning, and evidence for the generality of competency motivation would have to be accumulated across tasks and situations. This is not to say, however, that we would expect children to find this intrinsic satisfaction from learning and improvement in all areas of their activity. Nor does "competence motivation" encompass all aspects of achievement motivation; some motives to achieve are stimulated by the effects of success (or fear of failure) rather than by the accomplishing per se.

27. Facility in the use of resources for learning and problem solving

The child knows that he can obtain help and information from various external sources, knows what some of these sources are (adults, children, books, library, fire department, police department, hospital, etc.), and uses these resources appropriately and effectively.

28. Some positive attitudes toward learning and school experiences

The child does not have a generalized negative attitude toward learning and school experiences. While it is not realistic--or perhaps even functional--to expect every child to like all aspects of education and learning, he should have positive feelings toward some aspects and not reject the total process.

29. Enjoyment of humor, play, and fantasy

The child enjoys situations involving humor, play, and fantasy and participates in them within the limits of opportunity and ability. With increasing age, his sense of humor broadens, even to encompass himself.

Implications for Measurement, Research, and Policy

The foregoing statements about social competency carry with them certain implications for measurement, research, and policy relating to young children. Among these implications are two major ones:

1. The immediate need to translate the components of each of the twenty-nine statements into appropriate measurement terms. By "measurement" we include observations, ratings, records, and social indices, as well as tests (or other performance measures) and self-reports. Indeed, with the youngest children and for certain classes of variables throughout the age range, tests do not provide a valid basis for inferences about social competency; other measurement techniques must be used. Candidate measures already exist for a number of the social competency variables and dimensions (for various age levels and population groups), and the framework provided in this report offers a useful scheme for searching these measures out and codifying them. Furthermore, the goal statements, used along with standard principles of construct validity and psychometrics, provide a basis for evaluating the adequacy of the measures that are identified.

The codification and evaluation of existing measures will also reveal areas where new measures are needed and where construct validity must be

established. Considerations for measurement development and validation are offered in an earlier report by Anderson, Messick, and Hartshorne. That report includes sections on the importance of theoretical conceptualization, critical properties of measuring instruments, environmental assessment as a necessary concomitant of person assessment, educational and social applications of measurement, manpower development needs, and important policy supports.

2. The long-range importance of increasing our understanding of the mechanisms of learning and development. The goal statements presented in this report reflect certain fundamental inadequacies in both our theories and our empirical findings about young children; there are a number of processes that we simply do not yet understand. These inadequacies will be further reflected in the measures related to the goals and hence in any policy decisions based on uses of those measures unless we deliberately undertake coordinated efforts to increase our understanding and knowledge. It is, of course, essential that the results of these efforts be systematically incorporated into program applications. In other words, we cannot hope to improve the formulation of goals, the quality of measurement, or the appropriateness of policy decisions without a continuous commitment to research inquiry into the processes of human development.

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*The numbers after each variable refer to the numbers of the 29 competency statements in the section entitled "Components of Social Competency and Goals of Early Intervention Programs."

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